Company Ditch **HAER No.** WA-138
Turnbull National Wildlife Refuge, near intersection of Lance Hill & Mullinex Rds.
Vicinity of Cheney
Spokane County
Washington

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
San Francisco, California

HISTORIC AMERICAN ENGINEERING RECORD

COMPANY DITCH HAER No. WA-138

Location:	Turnbull National Wildlife Refuge, about one mile south of the intersection of Lance Hill and Mullinex roads, Cheney vicinity, Spokane County, Washington
Date of Construction:	ca. 1902
Builder:	William W. Cossalman
Present Owner:	Turnbull National Wildlife Refuge
Present Use:	No longer used for agricultural purposes. Scheduled to be partially filled in during process of marsh rehabilitation.
Significance:	The Company Ditch is a good representative of a system of ditches used by farmers during the early years of the twentieth century to drain marshes and ponds for agricultural use. Such activity took place throughout the area now largely encompassed by the Turnbull National Wildlife Refuge. Although headgates and control valves have been removed and replaced, the ditch retains elements of integrity that convey a sense of its role in the historic developments affecting wetlands in the surrounding area. Drainage of the wetlands promoted settlement, which in turn supported the growth of nearby communities. After 1937, the Company Ditch became a facet of environmental efforts to restore wetlands of the Turnbull National Wildlife Refuge to their former condition.
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Date:	August 1996

INTRODUCTION

The wooded scablands of Eastern Washington, which Turnbull National Wildlife Refuge is a part of, were occupied for thousands of years by American Indians. They took advantage of the sheltering canyons and the abundant water. Fish and game were available, and edible native plants grew in the rocky soil. When the first white settlers arrived, however, they regarded the land as largely worthless. They initially saw little hope for agriculture among the rocky outcroppings and scattered lakes and marshlands. As the available arable land was taken up, efforts began to turn marginal ground into productive fields. Farmers found that if ditches were dug, allowing drainage of marshes and ponds, wetlands became fertile meadows. Unfortunately, the meager soil could not maintain its fertility for long, and the scablands remained agriculturally marginal. During the 1930s, with national awareness of environmental conservation growing, the Turnbull National Wildlife Refuge was created. Since then, many of the efforts of the Fish and Wildlife Service have been aimed at reversing the drainage work of the pioneers and returning the area to its natural condition as a wildlife habitat.

STRUCTURE DESCRIPTION AND FUNCTION

The Company Ditch crosses what was historically known as the Cossalman Place, a farmstead dating to the late nineteenth century. It is a typical wetland setting common to the immediate area: rocky uplands wooded in pine are surrounded by meadows that were, before being drained by settlers, marshes and shallow lakes. Like so many others in the Cheney area, the meadow through which the ditch runs was once a marsh. The Company Ditch discharges into Long Lake, about a half mile southeast of the Cossalman farm buildings.

Averaging about 10 feet wide and 3 to 4 feet deep, the 1 1/2 mile long ditch begins in the extreme northwest corner of Sec. 34, T23N, R41E. Within its first few feet, it enters SW SW Sec. 27 and proceeds in a nearly straight line northeastward through the middle of the meadow. Near the center of SE Sec. 27, the Company Ditch is joined by a smaller ditch draining a pond immediately north of the Cossalman farm buildings east of Mullinex Road. At the confluence of the two drainage features, the Company Ditch turns 90 degrees southward a few feet to where a headgate with two screw valves controls the water flow. The valves are not original and have been preceded by several earlier varieties of similar mechanisms.

Below the headgate the ditch turns eastward, crossing under Mullinex Road through a concrete culvert built by Spokane County when improvements were made on the road. From there the

ditch proceeds ca. 0.3 mile to the east where it turns south for ca. 0.2 mile to Long Lake in SW Sec. 26.

Water levels in the ditch vary seasonally, the highest water coming in early spring with the melting of winter snows. With the headgate closed during heavy runoff, the ditch overflows its banks flooding the meadow along its borders. The segment of the ditch below the headgate remains virtually dry even during the wettest periods. Where the ditch is dry, a berm is visible near its south side consisting of material cleared out of the ditch.

The original function of the Company Ditch was quite simple. In order to farm the marshes and ponds of the scablands, farmers drained the wetlands. This was accomplished by digging ditches through the wetlands and draining the water into natural drainages. This lowered the immediate water table, leaving the soil for cultivation. The original Company Ditch probably did not have a headgate, operating on natural gravity flow to simply keep the fields dry. Later, when it became desirable to control the flow of water, various types of headgates and valves were used for regulation. Under the direction of the Turnbull National Wildlife Refuge, existing ditches have been used to maintain water levels within the wetlands.

ALTERATIONS IN APPEARANCE AND FUNCTION

The basic configuration of the Company Ditch seems to have changed little over the years. No doubt the ditch has been dredged to clear out accumulated sediment and debris. The two screw valves that comprise the headgate are not original. There have been several previous mechanical devices used to accomplish the same task, that of controlling the flow of water through the ditch. When the Company Ditch was first dug, it may not have had any regulating device at all. When the Fish and Wildlife Service first acquired the land, in 1947, some kind of water control structure was installed, but was later removed. The land reverted to private ownership and, in 1960, farmer Harold Smick built a wooden headgate in the ditch west of Mullinex Road. That structure was later removed and replaced by two screw-valves. The concrete culvert beneath Mullinex Road was installed when road improvements were made and probably replaced a less elaborate culvert.

PRESENT CONDITION

The Company Ditch has become shallower, but its course is still distinct as it makes its way through grasses and marshland toward Long Lake. The two screw-valve headgates, used to regulate water flow through the ditch, are still functional.

HISTORIC CONTEXT

The Company Ditch is but one of many similar features comprising an integrated system installed by settlers in the late nineteenth and early twentieth centuries to drain the wetlands south and east of Cheney. What is now the Turnbull National Wildlife Refuge consists primarily of these wetlands, and contains an extensive network of drainage ditches constructed by settlers. Since the late 1930s, Refuge management has focused on creating habitat for migratory waterfowl. Toward that end, the US Fish and Wildlife Service (FWS) has installed water control structures in many of the ditches which are now, ironically, being used to return the area to its original wetland condition. The Company Ditch is a good representative example of the environmental engineering that has occurred here over the past century.

Despite the obstacle to early settlement posed by the wetlands, the area nevertheless attracted settlers. The attraction may in part have been due to the efforts of land speculators which included both the Northern Pacific Railway and the local press. In fledgling communities settlers meant money to real estate promoters and businessmen throughout the West. Cheney was no exception. Its newspapermen were eager to promote the virtues of the surrounding countryside, even to the point of exaggeration, as evidenced by the following article entitled "Swamps" in the 3 June 1881 edition of the *Northwest Tribune*:

> A country is frequently condemned because it has swamps in it. . . . Yet swamps are a good thing for those who own them if they will only utilize them. Nine cases out of ten, this can be done, by digging trenches and confining the water in channels, so as to let the water pass off. And you have the richest and most productive spots in the country; nature has always provided means for making soils. . . . Let those who yearn after the luxuries of unproductive gravel beds have them, they are entirely welcome to their choice, give us the swamps, (or more properly speaking meadows) and remember that the people that sneer and despise their garden spots are either those who do not know their value, or else they are enemies of their neighbors, for having something good which they have not.

Those hardy settlers who took up the challenge of converting the wetlands to "garden spots" were to learn bitter lessons about soil fertility and, presumably, truth in advertising.

When settlers first arrived in the wetlands, they found the lowlands containing most of the best soil were perpetually under water, leading most settlers to dig ditches in attempts to drain their acreage. Drainage became virtually synonymous with settlement, and certainly enhanced property values. "For sale, a fine tule ranch, drained, seven miles southwest of Cheney, comprising 240 acres first-class deeded land," said an advertisement in the 21 September 1888 edition of the *Cheney Sentinel*.

One of the earliest attempts was organized by H. F. Grant, teacher at the Lakeview School south of Cheney. He encouraged farmers in a cooperative effort to drain lands in the vicinity of Turnbull Lake so that more students could attend the school, which also served as a community center (Bernard 1947:40). Shortly after the turn of the century, landowners formed a drainage district and began digging new ditches and improving earlier ones.

Sometime prior to 1902, the ditch here inventoried was constructed as part of a larger system designed to drain Long Lake and other wetlands in the immediate vicinity. William W. Cossalman, who owned the lands in Secs. 26 and 27, and ten other property owners entered into an agreement allowing water from their wetlands to drain upon the lands of other owners, to whom Cossalman et al paid the sizeable sum of $1,000. Dated 31 December 1902, the legal document providing for the drainage agreement refers to the ditch on the Cossalman property as the "Company Ditch."

Legal disputes later brought by owners of property flooded by draining delayed further developments until farmers formed the Reorganized Drainage District No. 1 in 1913. A crew of Italian laborers started work the next summer, completing four miles of new ditch at a cost of $13,000. Within a few years, 885.94 acres had been drained, out of the 2,720 total acres within the District (Bernard 1947:40-48). Simultaneously, farmers were draining other wetlands in the area. It is not known precisely what role the Company Ditch played in the Drainage District, but it appears that the ditch continued to drain Cossalman's property as originally designed.

Unfortunately for the luckless settlers, about ninety percent of the drained land proved unfit for growing crops on a long-term basis. Farmers planted timothy and redtop grasses for hay, which grew well during the initial years of cultivation. The peat soil lost its fertility rapidly, and the lowered water table resulting from draining off standing ponds left crops susceptible to drought. By the 1920s, the automobile had replaced horses as the primary mode of transportation, with the result being a decline in hay prices. Changing technology and the agricultural depression that preceded the Great Depression combined to worsen the plight of those scratching a living from lands with extremely limited diversification potential. After years of experiencing meager crop production and declining profits, many farmers were forced to abandon their lands, leaving banks with legal title to property of marginal value. Yet many hung on, gleaning subsistence by keeping a few dairy cows, grazing horses and cattle, and cutting timber for cordwood (Bernard 1947:47-50).

After William Cossalman's death in ca. 1921, his wife Mary and son James W. Cossalman ran the Meadowland Dairy at the farm. The dairy, which took its name from the meadow drained by the Company Ditch, bottled unpasteurized milk and cream and sold it in nearby Cheney and Spokane. While in operation, from the 1920s into the 1940s, the Meadowland Dairy was the second largest dairy in the Cheney area. By the time the Cossalmans sold their property to the

US government in 1947 for inclusion in the Turnbull National Wildlife Refuge, the dairy had closed and their farm was in disrepair.

The Cossalman property remained in federal hands only until 1953, when the government deeded it to Ivy M. Cordill in exchange for lands she held within the Refuge (Tract Book 214). During the brief time the property was under FWS control, Refuge managers installed a water control structure in the Company Ditch where it crossed under Mullinex Road. That structure was later removed (Proctor 1990).

In 1955 Ms. Cordill sold the property to Arthur K. and Anna Schafer, who in turn sold it to Harold and Shirley Smick in 1959. The next year the Smick's neighbor, Eldon Dow, removed fill and debris from the Company Ditch. Smick then installed a wooden headgate in the ditch west of Mullinex Road (Smick 1990). That headgate has since been removed and a screw-valve headgate installed.

Harry C. and Helen T. Helm acquired the property in 1969 and operated a cattle ranch there for some years. After Harry Helm's death, his son and daughter sold the lands to the US government in 1989 (Tract Book 214). For the second time in its history, the Cossalman Place and the Company Ditch became part of the Turnbull National Wildlife Refuge. The ditch now functions not to drain lands for agricultural purposes, but as an element is a larger system serving to restore wetlands for wildlife habitat.

SUMMARY

The Company Ditch is significant as a good representative of a system of ditches used first by farmers to drain, and later by the Fish and Wildlife Service to restore wetlands. Although headgates and control valves have been removed and replaced, the ditch retains elements of integrity (e.g., location, design, setting, feeling, and association) that convey a sense of its role in the historic developments affecting wetlands in the surrounding area. Drainage of the wetlands, promoted settlement, which in turn supported the growth of nearby communities (primarily Cheney). The later period of significance spans the years from 1937, when the Turnbull National Wildlife Refuge was established, to the present. During that time, a second phase of environmental engineering has again transformed a sizeable portion of the wetlands to their former condition to serve as wildlife habitat. From converting the frontier for man's purposes to helping restore the natural environment, the system of ditches, including the Company Ditch, has been associated with events that have made a significant contribution to the broad patterns of our history.

The Company Ditch has been documented in the Historic American Engineering Record because it will be affected by a proposed Turnbull National Wildlife Refuge wetlands restoration project. Several hundred feet of the Company Ditch will be filled with earth, thus restoring the historic

hydrology of the meadow. This action is part of an ongoing effort at the refuge to return the appearance and the ecology to what it was during its previous service as a wildlife habitat. Although portions of the ditch will still be discernable, its historic appearance will be lost, as will its function.

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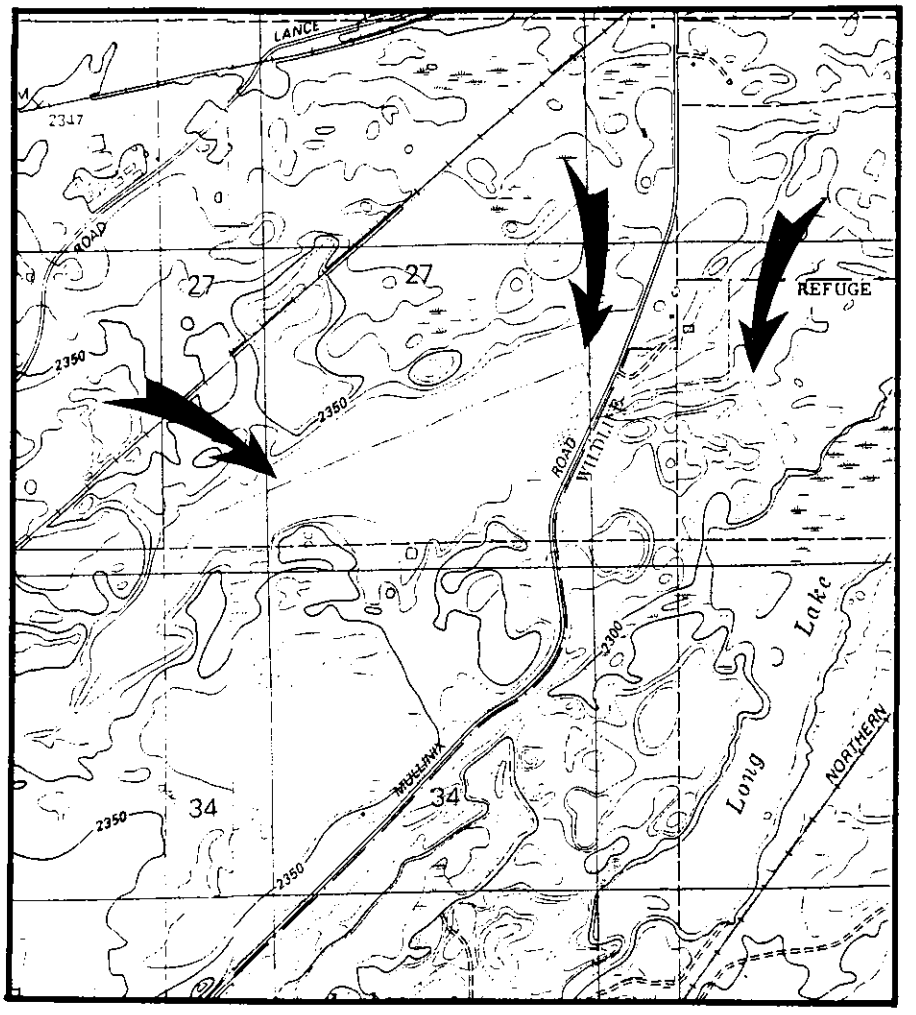

Location of Company Ditch, Turnbull National Wildlife Refuge. Cheney 1980 and Lance Hills 1980 USGS 7.5'